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EMPLOYMENT PROJECTIONS

FOR THE PIONEER VALLEY REGION
1991 TO 2005

GOVERNMENT DOCUMENTS
COLLECTION

JAN 14 1998

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Introduction

This report presents non-agricultural employment projections for the period 1991 - 2005 for the Pioneer Valley Region of Massachusetts.

■ The Pioneer Valley Region

The Pioneer Valley Region encompasses the forty-three communities of both Hampden and Hampshire Counties. It is located in the midwestern section of Massachusetts and as home to 602,878 residents, represents the fourth largest metropolitan area in New England. The region covers approximately 1200 square miles, roughly the same size as Rhode Island. The six cities in the region have a mayoral form of government while the thirty-seven towns are governed by town meeting.

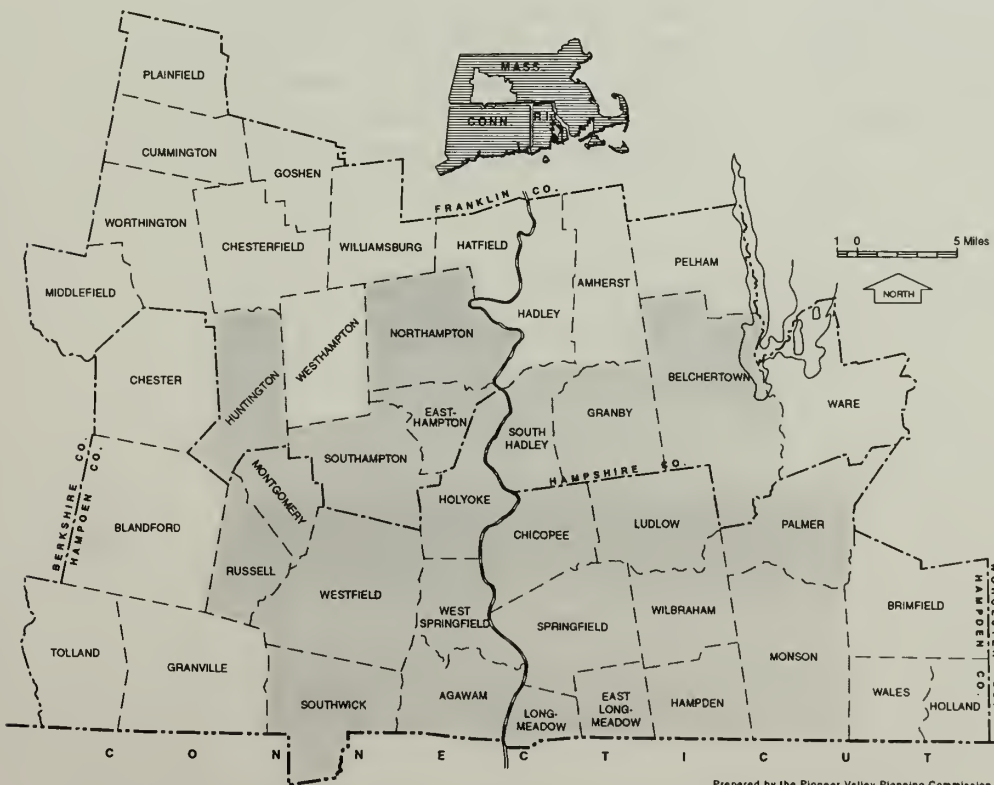
The area is unique within the Commonwealth of Massachusetts offering a diverse economic base, internationally known educational institutions and unparalleled scenic beauty. The Connecticut River with its fertile agricultural valley and the surround-

ing foothills of the Berkshire Mountains provide premier natural resources.

Choices in lifestyles range from contemporary downtown living to stately historic homes. Quality living is available in urban, rural or suburban communities.

Springfield, the third largest city in Massachusetts, is the cultural and economic center of the region. The cities of Holyoke and Chicopee were the first planned industrial communities in the nation. A variety of international companies have their headquarters or major plants in the region including Milton Bradley, Monsanto Chemical Company and Massachusetts Mutual Life Insurance Company.

Communities within the Springfield Metropolitan Statistical Area



Often referred to as the "Crossroads of New England," the Pioneer Valley Region is located at the interchange of the Massachusetts Turnpike and Interstate 91. Domestic and international air travel is available less than one-half hour south of Springfield from Bradley International Airport in Connecticut. The Boston & Maine Railroad has subsidiary rail facilities in Springfield.

Significant tourist attractions include the Basketball Hall of Fame, the Volleyball Hall of Fame, Mount Tom Ski Area, the Eastern States Exposition and the picturesque college communities of Amherst, Northampton and South Hadley.

No economy functions in a vacuum. The smaller the economic unit the more likely it is to import and export labor, and buy and sell products from the larger economic regions to which it belongs. The healthiest economies use local labor to produce a large number of goods and services for export outside their own region. The exporting of goods and services is a means of bringing “new” money into a region. Employing local labor keeps this new money in the region where it can be used to purchase goods and services from local businesses. Both sectors — export and local-serving — are important to a region’s health, but only export enterprises bring new money into the economy.

The Pioneer Valley Region is a small economic unit. Its economy is heavily influenced by the larger economies in within Massachusetts and north-central Connecticut. Those larger economies are influenced, in turn, by New England and the United States. Finally, there is the “global” economy. A relatively new term in economic discussions: national boundaries no longer present the types of barriers to the distribution of goods and information, hiring of labor and the establishment of markets which they once did. Competition and opportunities can be found in unfamiliar places, presenting challenges to overcome to compete successfully in an expanding global marketplace.

This phenomenon of global market expansion and competition and the relative position of the Pioneer Valley’s employment picture was considered in preparing this report. For the purpose of calculating these projections, the Planning Commission used a modified version of an export/constant share model. Twenty years of Pioneer Valley employment data was examined in relation to the Massachusetts economy and to national employment sub-sector trends. Projections for Massachusetts and individual sectors were then used to produce the projections. These projections do not take into account any substantial changes in economic policy or directives which may effect future economic development and employment growth.

It should be noted that employment expansion, while absolutely crucial to regional economic health, is not the only measure of health within a specific industry. Certain industries which are increasingly able to employ new technologies are projected to grow in terms of income generation; they are not expected to increase employment at the same rate that they increase capacity to produce goods and services. This pattern includes industries, for example, within the Transportation, Communications & Utilities, Manufacturing, and Finance, Insurance & Real Estate sectors. This report focuses exclusively on employment levels.

Regional Employment Projection

Overall employment for the region is projected to grow 11.4 percent during the period 1991 - 2005, an average rate of under one percent per year. Overall job growth for the Commonwealth for the same time period is projected to be 14.9 percent. This increase amounts to 26,067 new jobs for the region. At a slow rate of growth of under two percent projected by the Pioneer Valley Planning Commission, the population between the ages of sixteen and sixty-five would increase by approximately 33,000 people during the same time period. (1) Refer to the Appendix for a discussion of labor force size and participation rates.

Average Annual Employment in the Pioneer Valley Region

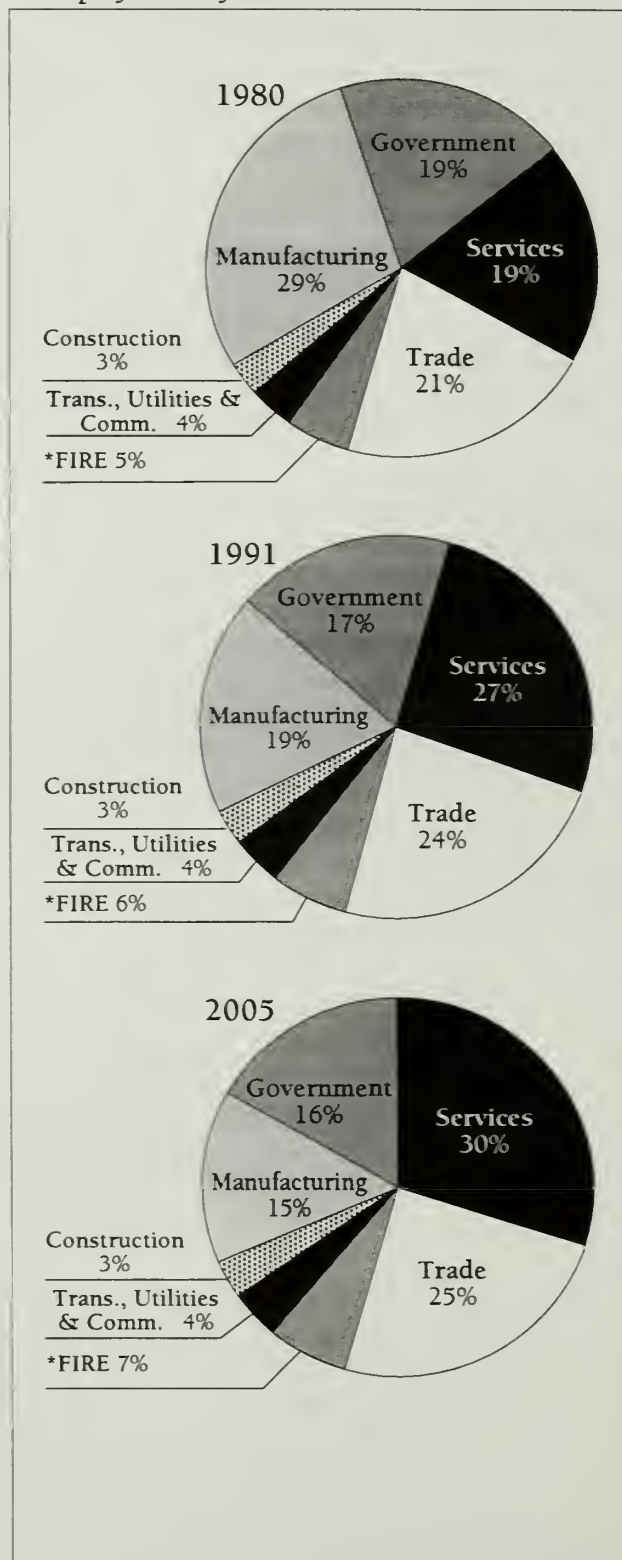
Sector	1991 Projected Employment	2005 Projected Employment	change	% change
Services	61,126	76,952	15,826	25.9
Wholesale & Retail Trade	54,555	62,744	8,189	15.0
Finance, Insurance and Real Estate	14,909	16,962	2,053	13.8
Transportation Communication & Utilities	9,403	10,614	1,211	12.8
Contract Construction	6,970	8,383	1,413	21.5
Manufacturing	43,494	37,534	(5,960)	(13.7)
Government	37,993	41,328	3,335	8.9
TOTAL	228,450	254,517	26,067	11.4

(1) See REGIONAL POPULATION PROJECTIONS, 2000 - 2020,
Pioneer Valley Planning Commission February, 1992.

■ Composition of Regional Employment

Job growth within Pioneer Valley industrial sectors varies considerably, with some sectors having a much higher than average growth rate. The Service sector, for example, is projected to grow 25.9 percent, increasing its share of total non-agricultural regional employment from 19 percent in 1980 to over 30 percent in 2005. Only one sector, Manufacturing, is projected to decline, reducing its share of total regional employment from 28.6 percent in 1980 to under 15 percent in 2005. This change in employment patterns — the decline of manufacturing employment and the rise of service employment — is at the heart of what is known as the “restructuring” of the economy and is part of a national trend. However, the loss of manufacturing jobs has been more severe in Massachusetts than in the United States, and even more pronounced in the Pioneer Valley due to the historically large concentration of manufacturing firms. Central to the discussion of restructuring is the difference in wages between the two sectors, and the ability of service sector enterprises to export their wares and bring new money into the region. Average manufacturing wages are almost fifty percent higher than average service employment wages. No other sectors of the economy have experienced as great change as services and manufacturing.

Employment By Sector



■ Average Annual Wages

Historically, wages in the Pioneer Valley region have been highest in the goods producing sectors of Manufacturing and contract construction. In 1991, these two sectors, along with Federal Government employment, experienced the highest wage rates in the region.

Average Annual Wages

	Ave. Annual Wage	Employment By Share
All Sectors,	\$23,650	
Services	\$21,872	26.7%
Wholesale Trade	\$29,023	4.8%
Retail Trade	\$12,684	18.8%
Finance, Insurance and Real Estate	\$28,109	6.5%
Contract Construction	\$29,603	3.0%
Manufacturing	\$30,094	19.0%
Local Government	\$24,778	10.0%
State Government	\$25,550	3.2%
Federal Government	\$31,016	3.4%

■ A Note on Wage Information

Detailed information on average annual wages within the major industrial subgroups is available for the Springfield Metropolitan Statistical Area (MSA) but not the Pioneer Valley Region as a whole. However, as can be seen from a comparison of MSA wages with Pioneer Valley Region wages, the difference in average annual wages between the two is extremely small. Therefore, for the purposes of this report it was deemed reasonable to use data from the MSA when regional data on wages was unavailable. In each instance where MSA was used rather than regional data, the number is noted with an asterisk (*).

Average Annual Wage Comparison

Year	Pioneer Valley Region	MSA
1988	\$20,595	\$20,608
1989	\$21,513	\$21,516
1990	\$22,575	\$22,619
1991	\$23,582	\$23,650

Projections by Sector

Future regional employment levels have been projected for each major industrial sector in the Pioneer Valley. The information is organized into three sections under each sector. First appears an overall description of estimated employment change to the year 2005. This is followed by a graphic portrayal of the share of total employment within that sector and the changes forecast from the base year of 1991 up to 2005. The second section describes in greater detail the types of businesses which are found in the sector and their relative number of employees for 1991. Finally, a comparison of wages within the sector and its specific business types is presented

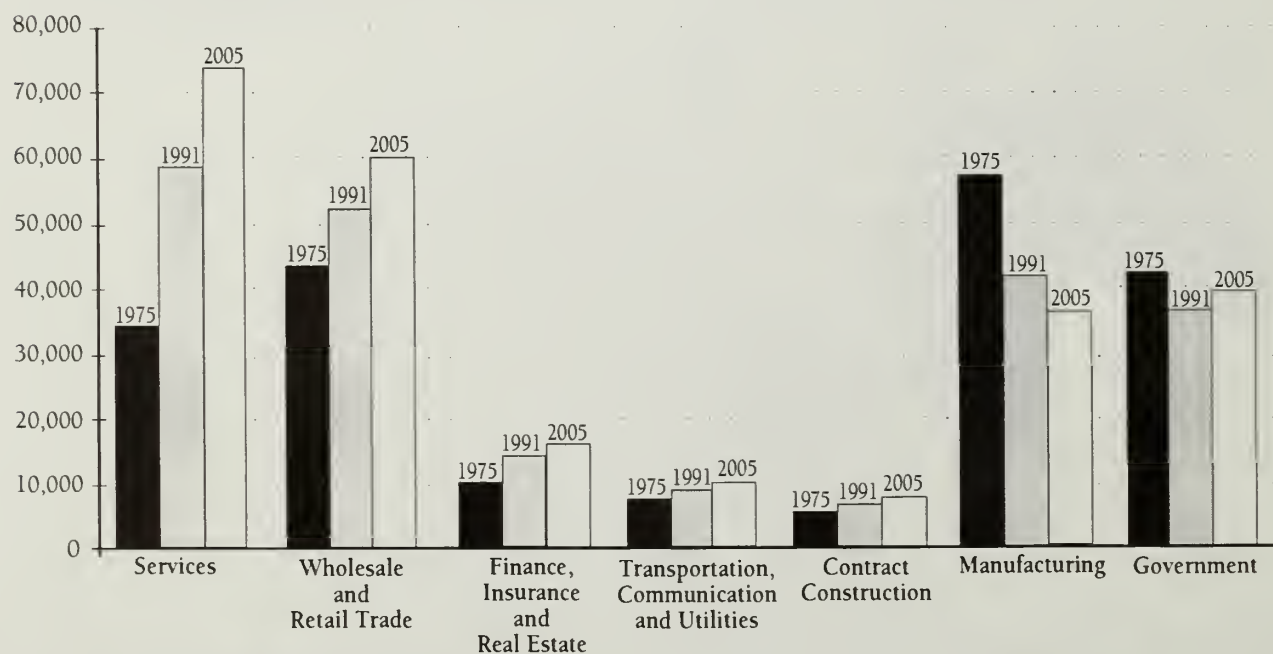
■ Services

The service sector includes a wide range of business types including hotels and lodging places, auto repair and parking, health, legal and educational services. Service industries have grown rapidly throughout the United States. The Pioneer Valley is no exception. 27,795 service sector jobs added between 1975 and 1990, increasing from 35,734 employees to 63,529 employees. This increase was almost thirty five percent of our total job growth for the period. In Massachusetts as a whole, services accounted for eighty five percent of job growth. By 2005 the sector is projected to add 15,834 jobs.

Share of Regional Employment

1991 Employment	61,126
% of Total Regional Employment	26.7%
Projected 2005 Employment	76,952
% of Projected Total Employment	30.2%

Employment Projections in the Pioneer Valley Region



In 1991, more than one quarter (26.7%) of the regional total employment came from service sector jobs. Although some decline was registered between 1990 and 1991, projections indicate that Services will continue an overall increase into the next century. By 2005 services should account for thirty percent of the regional economy.

Composition & Employees

Health Services	26,642
Educational Services	7,754
Social Services	8,643
Business Services	6,047

Health, educational, social and business services provide eighty percent of total service sector employment. Health services is the largest sub-division within the sector, with over 25,000 employees in 1991. Hospitals, nursing and personal care facilities and office and clinics of medical doctors account for the majority of health service jobs.

Educational and Social services vie for second place, providing 7,754 and 8,643 jobs respectively. The education sub-sector includes employment in private elementary and secondary schools, colleges and universities, libraries and a variety of other educational services. Public school, community college and many University of Massachusetts employees are counted in the government sector. Social services include child care and residential services, as well as individual and family services and job training.

Business services, with 6,047 employees include an enormous range of services from advertising and computer services, to pest control, photo finishing and building maintenance services.

WAGES

Average Annual Wages 1991 by Service Sector

Health Services	\$26,846
Educational Services	\$23,729
Social Services	\$15,296
Business Services	\$15,412
Total Services Sector	\$21,872

The wide variety of business types within the sector is also reflected in the wide range in average annual wages. The 1991 average annual wage for the sector as a whole was \$21,872*, slightly lower than the average annual overall wage for the region. However, average annual wages in health services were \$5,000 above the total services average wage, and those in Business and social services were approximately \$6,500 below.

■ Wholesale and Retail Trade

This sector is projected to rise fifteen percent between 1991 and 2005, with a total net increase of 8,183 jobs. Between 1972 and 1991 over 10,000 wholesale and retail jobs were added in the region, an overall increase of 23.7 percent. The sector reached its employment peak in 1989 with 64,150 jobs, adding more than 20,000 jobs between 1972 and 1989. However, almost half of that gain was lost between 1989 and 1991. Despite the projected gain of 8,183 jobs, the sector is not expected to reach the 1989 employment level by 2005.

Share of Regional Employment

1991 Employment	54,555
% of Total Regional Employment	24%
.....	
Projected 2005 Employment	62,738
% of Projected Total Employment	25%

The projected fifteen percent growth rate is more than three and a half percentage points above the overall employment growth rate. Therefore, by 2005 wholesale and retail trade will command a slightly larger share of total regional employment, moving from 23.9 percent in 1991 to 24.6 percent in 2005.

WHOLESALE TRADE

Wholesale trade accounts for about one-fifth of total employment in this sector, or approximately 11,000 jobs. This sub-sector is divided once again into durable and non-durable goods. Durable goods account for about 6,000 jobs, the largest numbers of which are in the following categories:

- Motor vehicles, parts and supplies
- Lumber and construction materials
- Professional and commercial equipment
- Electrical goods
- Machinery, equipment and supplies

A smaller number of jobs are in furniture and home furnishings, metals and minerals, except petroleum and scrap and waste materials.

Non-durable goods include:

- Groceries and related products
- Beer, wine and distilled beverages
- Paper and paper products
- Chemicals and Allied products

RETAIL TRADE

Average annual employment in 1991 in the retail trade sub-sector was approximately 43,000 jobs. This included employment in eating and drinking places, food stores, general merchandise stores, service stations and a host of other shopping goods stores.

Eating and drinking places alone account for almost 15,000 jobs. Food stores rank second with 7,000 plus jobs. Growth in retail trade is closely linked to growth in the labor force, personal income and population. The projected slow growth of the population within the region and the aging of the population suggest that expansion of this sector will be limited.

WAGES

Average Annual Wages, 1991

Wholesale Trade	\$29,023
.....	
Retail Trade	\$12,684

Wages in retail trade are forty six percent below average annual wages overall. The average annual wage for a retail trade employee in 1991 was \$12,684.* Wages in wholesale trade, on the other hand are considerably higher than the average annual wage, and 129 percent higher than those in retail trade.

■ Finance, Insurance and Real Estate (FIRE)

This sector is projected to increase its employment by 13.8 percent by the year 2005, adding 2,051 jobs to its 1991 employment base. These additional jobs will bring the employment total to 16,962. It is expected that the overall growth rate during the projection period will be affected by technological change in the industry which has seen increasing automation of those jobs that do not require direct service.

Share of Regional Employment

1991 Employment	14,909
% Total Regional Employment	6.5%
.....	
Projected 2005 Employment	16,962
% of Projected Total Employment	6.5%

FIRE has held a steady share of the regional economy for fifteen years, hovering between 6.2% - 6.4%. This pattern exists despite the downturn between 1988 and 1991 when the sector lost 1,100 jobs. Although that job loss accounted for 7 percent of the FIRE employment base, the rate of loss was considerably less than the 10.8 percent loss in average annual employment experienced by the region during the same period. The projected increase of 13.8 percent will increase the FIRE share of regional employment slightly to 6.7 percent.

COMPOSITION

Three major subdivisions of this sector hold over eighty percent of FIRE's total employment. Insurance carriers are the largest single group with over forty four percent of the total sector employment. Insurance carrier employment is extremely strong in the Pioneer Valley region, having a 12.5 percent of the Commonwealth's employment in this sub-sector. The remainder of employment in this sector is divided between depository institutions and insurance agents, brokers and service.

Composition & Employees

Sub-sector	Average Annual Employment
.....	
Insurance carriers	6,641
.....	
Depository institutions	4,185
.....	
Insurance agents, Brokers and service	1,193
.....	
Other	2,890

WAGES

Wages are generally high in this sector. The average annual wage in 1991 was \$28,109*, \$4,500 more than the regional total average, a difference of almost 20 percent. Jobs within the insurance carriers sub-sector have the highest average annual wages outside of the manufacturing sector. In 1991 the average annual wage was \$32,640*.

■ *Transportation, Communication and Utilities*

This sector is projected to add 1,212 jobs between 1991 and 2005. Although this increase of 12.8 percent is significant, the additional jobs will only bring the industry to slightly above 1990 levels. It is expected that new technologies will help to make some of the industries in this sector more productive while creating lower demand for employment. On the other hand, certain sub-sector industries with small concentrations in the region such as water and sanitary services are projected for high rates of growth nationally.

Share of Regional Employment

1991 Employment	9,403
% of Total Regional Employment	4.1%
Projected 2005 Employment	10,614
% of Projected Total Employment	4.2%

The projected increase of 12.8 percent between 1991 and 2005, slightly higher than the overall projected rate of growth of 11.4 percent allows this sector to marginally increase its share of regional employment from 4.1 percent to forty two percent during the projection period.

COMPOSITION

This sector includes a wide array of industry types. The chart below lists the major categories in order of employment share.

Composition & Employees

Industry	% of Average Annual Employment
Trucking and warehousing	27.7%
Communication	26.7%
Local and interurban passenger transit	21.2%
Electric, gas and sanitary services	15.2%
Transportation services	8.1%
Transportation by air	1.1%

WAGES

The skilled labor required by many jobs in this sector has commanded high wages for employees. In 1991 the average annual wage was \$28,495*, more than twenty percent higher than the overall average annual wage for the region.

■ Contract Construction

Construction is a small but important sector of the regional economy because of its high wages and production of tangible goods. This sector is expected to add 1,497 jobs by 2005, an increase of 20.2 percent over 1991. Construction in the United States overall is expected to grow by twenty nine percent during the same period. Growth is expected to be fueled primarily by home renovations and repairs rather than major private sector projects.

Share of Regional Employment

1991 Employment	6,970
% of Total Regional Employment	3.0%
Projected 2005 Employment	8,383
% of Projected Total Employment	3.3%

Contract construction is expected to marginally increase its share of the regional employment pie by 0.3 percent during the time period. The large inventory of office space in the region, whose construction helped fuel the growth of the construction industry in the 1980s, suggests that this will not be a major source of construction jobs in the immediate future. However, over the long term contract construction is expected to provide a constant share of regional employment.

COMPOSITION

There are three sub-sectors of contract construction. They are listed below by share of total sector employment.

Special trade contractors, which provide the largest share of employment, includes jobs in plumbing, heating and air conditioning, painting, electrical work, masonry, carpentry, roofing, concrete work, and a host of other special trades.

The general contractors and operative builders category encompasses those who produce structures. Finally, the heavy construction sub-sector consists of highway and street construction and other non-building construction such as dams.

Composition & Employees

Construction	6,970
Special trade contractors	4,743
General contractors and operative builders	1,973
Heavy construction, except building	254

WAGES

Historically, average annual wages in contract construction are among the highest in the region and have kept pace with those in the other goods-producing sector, manufacturing.

Average Annual Wages, (1988-1991)

Year	Average Annual Wage
1988	\$27,433
1989	\$28,356
1990	\$29,442
1991	\$29,603

■ Manufacturing

Manufacturing employment has declined steadily since 1979 with the exception of a brief upturn in 1984. Total employment in 1991 was 43,494 jobs, but the sector is expected to continue its decline, losing 13.7 percent, or 5,960 jobs by 2005. This is a 36.8 percent loss of jobs between 1975 and 2005, and constitutes one of the most serious economic problems.

Share of Regional Employment

1991 Employment	43,494
% of Total Regional Employment	19.0%
Projected 2005 Employment	37,534
% of Projected Total Employment	14.7%

Manufacturing holds an important but declining share of the total non-agricultural employment. In 1975 manufacturing constituted 35.8 percent of the region's employment. In 1980 the region held 66,270 manufacturing jobs representing 28.6 percent of non-agricultural employment. In 1991, 18.9 percent of employment, representing over 43,000 jobs were in durable and non-durable goods manufacturing. By the year 2005, manufacturing is expected to produce 14.7 percent of the region's employment. This decline in manufacturing is especially important because of its relatively high wages, and because it is an export industry, bringing money into the region.

Manufacturing is one of only two goods producing sectors — the other being contract construction. By its nature manufacturing is an export industry with products being shipped to other regions for sale, thus generating new money. An example illustrates the importance of manufacturing to the regional economy: In 1990 the value of shipments

from Paper and Allied Products manufacturers in this region was \$679.4 million. This is 6 percent of the regional total value of shipments, even though the industry accounts for only 3.1 percent of total non-agricultural employment.

COMPOSITION

Eighteen industrial categories in the Manufacturing sector that are represented in the Pioneer Valley region. The chart on the right shows the types of manufacturing that provide the most jobs within the sector. These eight industries provide over 80 percent of the manufacturing employment.

The first four industries shown are fundamentally linked to each other: they purchase and sell goods to each other. For example, at least one quarter of employment in the industrial machinery and equipment category goes toward producing machinery for the paper, printing and metalworking industries. These interrelationships have provided nearby markets, fast delivery and customized service and helped to develop the strength and endurance of these industries over the years. However, the close connections also insure that downturns in one industry will be reflected in the others. In addition, they diminish the ability of the goods producing sector to bring in money from outside the region by exporting their products.

Composition & Employees

Manufacturing	43,494	
Paper & allied products	7,089	16.1%
Fabricated Metal Products	5,741	13.2%
Printing and Publishing	5,480	12.6%
Industrial Machinery & Equipment	5,437	12.5%
Rubber & miscellaneous products	4,306	9.9%
Toys & Sporting Goods	2,957	6.8%
Electronic & other equipment	2,175	5.0%
Chemicals & allied products	2,087	4.8%

Among the major manufacturing industries, only printing and publishing is projected by the Commonwealth to grow in the next decade.

WAGES

Wages in manufacturing are among the highest in the region, but there is wide variation within the sector. The chart below shows the average annual wage rates for 1991 for the largest employment industries within the sector.

Average Annual Wage, 1991

Manufacturing	\$30,094
Chemical & allied products	\$41,794
Industrial Machinery & Equipment	37,672
Electronic & other electronic Equipment	\$30,843
Paper & allied products	\$30,092
Rubber & miscellaneous products	\$29,907
Fabricated Metal Products	\$29,474
Toys & Sporting Goods	\$29,348
Printing and Publishing	\$25,859

■ Government

Government employment in the region has been cyclical. When the department of employment and Training first began collecting information on government employment in 1980 there were 44,043 jobs in the region. That figure declined steadily until 1984, by which time 4,500 jobs had been lost. By 1988 employment had grown again, reaching 43,543 jobs before beginning another decline. The 1991 levels accounted for six thousand jobs, or 13.7 percent, below 1980 levels. The government sector is expected to see an increase of just under 9 percent between 1991 and 2005. Even with this increase, however, 1975 levels will not be reached.

Share of Regional Employment

1991 Employment	37,933
% of Total Regional Employment	41,328
Projected Employment	41,328
% of Projected Employment	16.2%

In 1980, local, state and federal governments provided nineteen percent of the jobs. By 1991 that share had declined to 16.6 percent. This decline in share of regional employment is expected to slow down, with the sector projected to lose only 0.4 percent of its share during the projection period. Changing federal and state administrations account for some of that change, but Proposition 2-1/2, enacted in 1980, had the greatest effect on the ability of Massachusetts communities to maintain employment levels.

COMPOSITION

Government jobs in the region include those in public education including preschool through high school, community colleges and many employees of University of Massachusetts. Local government employees including teachers make up the largest share of the sector's employment with approximately 24,600 jobs in 1991. State and federal jobs split the difference with approximately 6,600 jobs in each category.

WAGES

Wages vary significantly within the sector. On average, federal employees earn twenty-five percent more than state and local employees.

Average Annual Wages

Federal	\$31,016
Local	\$24,778
State	\$25,550

The Pioneer Valley Planning Commission maintains extensive demographic, economic, and land use data as a resource for individuals, communities and businesses. The Regional Information Center can provide customized research and analysis along with mapping services. Contact the Commission for personal assistance in meeting your data needs.



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